2008-09 STEM Grant Recipients

Agency: Blair-Taylor SD	**Funding:** $5,000	**Project Title:** RDR - Robotic Design and Research

Abstract: Students will be offered the opportunity to join First Lego League Competition, an international program for children ages 9-14. It combines a hands-on, interactive robotics program and a research presentation with a sports-like atmosphere. The Challenge is based on a set of real-world problems facing scientists today.

Agency: Burlington Area SD	**Funding:** $5,000	**Project Title:** Forest Fair

Abstract: A forest fair will provide environmental science and math activities for 480 sixth grade students, half from inner city Racine Unified and half from Burlington Dyer School. The outdoor activities will be designed and facilitated by 24 BHS forestry students under the guidance of the BHS forestry science teacher and other science staff.

Agency: Clayton SD	**Funding:** $4,982	**Project Title:** Biotechnology-Age of information

Abstract: This proposal will expose students to such laboratory techniques as plant tissue culture, gel electrophoresis, gene mapping and DNA manipulation. This exposure we provide will bridge the gap between industry and students who are potential workers. This should generate interest and contribute to higher enrollment in related technical programs.

Agency: Ellsworth Community SD	**Funding:** $5,000	**Project Title:** STEM in Biology & Agriculture Collaboration

Abstract: This proposal is designed to address the gap in student performance between males and females in the areas of math and science in the Ellsworth School District. To encourage females to apply technological skills to science, this project provides software and related equipment to carry out virtual dissections in a Biology class as well as integrate technology into measuring, tracking, and documenting (math applications) changes in various body functions.

Agency: Gale-Ettrick-Trempealeau	**Funding:** $5,000	**Project Title:** Black River Watershed Cooperative

Abstract: This proposal is to use a STEM grant to establish a process for monitoring inland streams using a school based and student centric model. This model will use Geographical Information System (GIS) to turn out very useful information for the River Alliance of Wisconsin, the Wisconsin Department of Natural Resources as well as information to the citizens of Wisconsin.

Agency: Kettle Moraine SD	**Funding:** $5,000	**Project Title:** Girls Lego Competition Team

Abstract: As part of the implementation of PLTW, the district also offers a Lego Competition Club to engage students in STEM in and out of the school day. The district is committed to engaging young women in a way that invokes interest and sustains them in math, science and technology. With this in mind, this proposal seeks to expand the Lego Competition Club to include a girls-only team.

Agency: Lac du Flambeau #1 SD	**Funding:** $5,000	**Project Title:** Technology & Engineering Career Exploration

Abstract: This project will focus on STEM related career exploration. This will be done by setting up an Assessment Lab for middle school students, grades 6-8, to explore careers using the SkillsUSA Work Force Ready System online and to conduct other STEM related career exploration studies. Aerodynamics Unit software focusing on math and science academic achievement will be purchased to implement with students.

Agency: Madison Metropolitan SD	**Funding:** $4,866	**Project Title:** NSBE Jr. @ East High School and Beyond

Abstract: Madison East High School registered the first NSBE Jr. chapter in Madison in Fall 2008, becoming an affiliate of the National Society of Black Engineers and a close partner of the NSBE-Wisconsin Black Engineering Student Society on the UW-Madison campus. Student members, who are African American, Latino, Southeast Asian, and White, have participated in regional and national engineering events, as well as monthly meetings with collegiate members. Members benefit from mentorship by African-American college students in

STEM fields; many are taking math beyond requirements and elective Project Lead the Way engineering courses, becoming public advocates for their club, and considering potential leadership positions as college freshmen-to-be.

Agency: Mellen SD	**Funding:** $4,994	**Project Title:** Podcasting Science in Society

Abstract: Intereset in advanced science classes in the economically disadvantaged town of Mellen will increase as students create and produce monthly "Science in Society" video podcasts to improve familiarity with science concepts as they affect the daily lives of their friends, families, and neighbors in their community.

Agency: Oconto Falls Public SD	**Funding:** $5,000	**Project Title:** Winter Science and Technology Academy

Abstract: This first Winter Science and Technology Academy will offer five STEM classes concentrating on engineering, technology, and science. Classes will utilize activities from the Einstein Project, a research-based program. All elementary and middle school students can participate in the classes; however, underrepresented populations will be recruited. The goals of the Winter Science and Technology Academy program will be to increase awareness of STEM careers through field trips, guest speakers and research to create an interest in STEM classes. This is a dynamic, hands-on program.

Agency: Oregon SD	**Funding:** $5,000	**Project Title:** OHS Innovative Math STEM Project

Abstract: This proposal will combine instructional strengths of two pilot programs, hands-on vocational math class for 11th and 12th grade students and teaching a math class using Interactive White Board technology, and focus this STEM project (new class) to integrate algebra and geometry with OHS's CTE classes students will learn and retain the important math skills so they can succeed as upperclassment in the advanced CTE classes which prepare out students for immediate employment, adult apprentice programs or continuing post-secondary education programs.

Agency: River Valley SD	**Funding:** $3,592	**Project Title:** Real Life STEM and Career Exploration

Abstract: The proposed project builds relevance into STEM learning by bringing typical problems encountered by local STEM related businesses into the classroom and by bringing students out of the classroom to shadow and/or interview employees currently working in a STEM-related fields. This project will serve as a spring board to launch STEM teachers and businesses into a mutualistic relationship which benefits the students. This relationship will be sustained by students' enthusiasm for hands-on, relevant learning, and the business's interest in building an innovative, skilled human resource.

Agency: Wausau SD	**Funding:** $1,660	**Project Title:** Science Individuals Discovering Opportunities for Leadership Success (IDOL)

Abstract: This workshop will give girls an opportunity to explore the science, technology, mathematics and engineering fields in a small group, hands-on setting. Each girl will have the opportunity to sign up for several small group sessions throughout the day lead by area professionals in each of the fields. Through these sessions, the girls will be exposed to the opportunities available through STEM careers. Each professional will discuss their specific area of expertise and will lead the girls through an activity related to their particular profession. Participants will have the opportunity to interact and ask questions of the professionals.

Agency: Wisconsin Heights SD	**Funding:** $4,710	**Project Title:** Inquiry-Based Science Learning

Abstract: The goal of our project is to develop and implement authentic and effective inquiry-based science instruction as a pilot program in the 4th grade classrooms. BOA students, in conjunction with the UW-Madison Biology Outreach Club, and under the direction of Biocore instructors, will offer a week-long Summer Science Camp for 4th-12th grade students. During the Science Camp, BOA students will introduce and model inquiry-based activities aligned with Wisconsin science standards.